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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,957	03/24/2004	Wen Zhao	1578.800 (10917-US-PAT)	4088
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/807,957	<b>Applicant(s)</b> ZHAO ET AL.	
	<b>Examiner</b> ANDREW WENDELL	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7,9-20,22,23,27-32,36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,9-20,22,23,27-32,36 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/26/2008 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 17, and 36-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Examiner can not find support in applicant's specification that states the desired component value actually being "an energy per chip to in an interference density value". Examiner only can spot support in applicant's specification that one of the evaluation measurements is an energy per chip to in an interference density value but it is not a desired component value (Page 2 line 14-20 and Page 4 lines 5-9 of applicant's specification).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-5, 7, 9-20, 22-23, 27-32, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (WO 00/08706) in view of Ue et al. (US Pat# 6,487,394) and further in view of Chen et al. (US Pat Pub# 2003/0134655).

Regarding claim 1, method claim 1 is rejected for the same reason as system claim 17 since the recited elements would perform the claimed steps.

Regarding claim 3, method claim 3 is rejected for the same reason as system claim 20 since the recited elements would perform the claimed steps.

Regarding claim 4, method claim 4 is rejected for the same reason as system claim 18 since the recited elements would perform the claimed steps.

Regarding claim 5, method claim 5 is rejected for the same reason as system claim 19 since the recited elements would perform the claimed steps.

Regarding claim 7, Park further teaches the transmit power assigned to the forward link preamble signal, is assigned independently of the basestation's transmission data rate (Page 7 lines 20-23, it is silent of setting a transmission rate so the power is independent of the transmission rate).

Regarding claim 9, method claim 9 is rejected for the same reason as system claim 27 since the recited elements would perform the claimed steps.

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Regarding claim 10, method claim 10 is rejected for the same reason as system claim 28 since the recited elements would perform the claimed steps.

Regarding claim 11, method claim 11 is rejected for the same reason as system claim 29 since the recited elements would perform the claimed steps.

Regarding claim 12, method claim 12 is rejected for the same reason as system claim 30 since the recited elements would perform the claimed steps.

Regarding claim 13, method claim 13 is rejected for the same reason as system claim 31 since the recited elements would perform the claimed steps.

Regarding claim 14, method claim 14 is rejected for the same reason as system claim 32 since the recited elements would perform the claimed steps.

Regarding claim 15, method claim 15 is rejected for the same reason as system claim 23 since the recited elements would perform the claimed steps.

Regarding claim 16, Park further teaches wherein the communications network is a CDMA network (Page 10 lines 8-19).

Regarding claim 17, Park's device for controlling initial transmission power of forward link channel in mobile communications system teaches a system for controlling transmit power of a forward link signal in a communications network (Page 2 lines 15-23), the system comprising a mobile device MS (Fig. 2), the mobile device adapted to receive a first signal from a basestation 212 (Fig. 2) prior to receiving the preamble signal (in applicant's specification on page 1 lines 21-23 and page 3 lines 21-24 it defines a preamble as when the mobile device and the basestation become acquired and synchronized, a pilot signal does not do this step. A pilot signal is transmitted

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before a preamble to alert mobile devices that the basestation is around and then after the pilot then the mobile device and basestation become acquired and synchronized); evaluate a signal the first signal 214 (Fig. 2); and transmit desired preamble signal, the desired preamble signal being an energy per chip to in an interference density value (Page 5 lines 13-16, Page 5 line 25-Page 6 line 5, Page 7 line 24-Page 8 line 4, Page 10 line 19, Page 11 lines 11-14, Page 12 lines 3-9, and Page 14 line 6-9); and a basestation BS (Fig. 2), the basestation being adapted to send the first signal with a first signal transmit power 212 (Fig. 2) prior to transmitting the preamble signal (see explanation above); receive the information about the mobile device received signal and the desired preamble signal from the mobile device 216 (Fig. 2); and set the transmit power of the forward link preamble signal based on the information about the received signal and the first signal transmit power 216-218 (Fig. 2), the setting of the transmit power in the basestation including estimating a value of a signal component of the first signal based on the information about the received signal to noise ratio (Page 14 line 3-Page 15 line 7); determining a desired value for the signal component (Page 14 line 3-Page 15 line 7); and setting the transmit power of the forward link preamble signal by adding the difference between the desired preamble signal component value and the estimated signal component value to the first signal transmit power (Page 14 line 3-Page 15 line 7); and wherein the forward link preamble signal, sent during the traffic channel initialization period in a CDMA network (Page 10 lines 8-19). Park fails to clearly teach evaluating a signal to noise ratio and a desired signal component value.

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Ue's radio communication device of controlling transmission rate teaches a system for controlling transmit power of a forward link signal in a communications network (Col. 1 line 58-Col. 2 line 4), the system comprising a mobile device (Fig. 2), the mobile device adapted to receive a first signal from a basestation (Fig. 8); evaluate a signal to noise ratio of the first signal (Col. 3 line 66-Col. 4 line 27 and Col. 5 lines 31-48); and transmit information about the received signal to noise ratio to the basestation (Fig. 8, Col. 5 lines 31-48); and the basestation, the basestation being adapted to send the first signal with a first signal transmit power (Fig. 8, Col. 5 lines 31-48); receive the information about the received signal to noise ratio from the mobile device (Fig. 8 and Fig. 12); and set the transmit power of the forward link signal based on the information about the received signal to noise ratio and the first signal transmit power (Fig. 12 and Col. 6 line 59-Col. 7 line 8), the setting of the transmit power in the basestation including estimating a value of a signal component of the first signal based on the information about the received signal to noise ratio (Fig. 12 and Col. 6 line 59-Col. 7 line 8); determining a desired value for the signal component (Fig. 12 and Col. 6 line 59-Col. 7 line 8).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate evaluating a signal to noise ratio as taught by Ue into Park's device for controlling initial transmission power of forward link channel in mobile communications system in order to reduce interference and increase performance (Col. 1 lines 46-55).

Park and Ue fail to teach a desired signal component value.

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Chen teaches transmitting a desired component value desired by the mobile device QoS (Sections 0064-0065; the mobile station sends to the base station desired QoS parameters i.e. bandwidth, data rate, priority, etc.) and a basestation that receives the desired signal component value and sets transmission power (transmit level) based on the desired signal component value (Section 0065).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a desired signal component value as taught by Chen into evaluating a signal to noise ratio as taught by Ue into Park's device for controlling initial transmission power of forward link channel in mobile communications system in order to improve power control apparatuses (Section 0018).

Regarding claim 18, Park further teaches wherein the first signal is a pilot signal 212 (Fig. 2).

Regarding claim 19, Park further teaches wherein the transmitting of information from the mobile device is performed over an access channel 216 (Fig. 2).

Regarding claim 20, Park further teaches wherein the forward link signal is a preamble on a traffic channel is sent from the basestation to the mobile device (Fig. 1 and 2).

Regarding claim 22, Park further teaches wherein the evaluating of the first signal in the mobile device is performed on a first signal component (Page 14 line 3- Page 15 line 7).



Regarding claim 23, Park further teaches wherein the first signal component is the  $E_c/I_o$  of the first signal (Page 14 line 3-Page 15 line 7).

Regarding claim 27, Ue further teaches wherein the desired signal component value is limited by a threshold value, whereby if the value based on the mobile device exceeds the threshold value, the desired signal component value is set to the threshold value (Fig. 12).

Regarding claim 28, Park further teaches wherein the desired preamble signal component value is selected from a predetermined value at the basestation and a value received from the mobile device (Page 14 line 3-Page 15 line 7).

Regarding claim 29, Park further teaches wherein the selecting is performed based on the higher value between the predetermined value at the basestation and the value received from the mobile device (Page 14 line 3-Page 15 line 7).

Regarding claim 30, Ue further teaches wherein the selecting is limited by a threshold value, whereby if the value received from the mobile device exceeds the threshold value, the selecting step uses the threshold value (Fig. 12).

Regarding claim 31, Park further teaches wherein the setting further includes adding an offset parameter to the transmit power of the forward link preamble signal (Page 14 line 3-Page 15 line 7).

Regarding claim 32, Park further teaches wherein the value of the offset parameter is between 0 and 6 dB (Page 14 line 3-Page 15 line 7, the value could fall in that range in a CDMA network).

Regarding claim 36, apparatus claim 36 is rejected for the same reason as system claim 17 since the recited elements would perform the claimed steps. Note, Park teaches the transmitter setting the transmit power of the forward link signal independently of a transmission rate of the base station (Page 7 lines 20-23, it is silent of setting a transmission rate so the power is independent of the transmission rate).

Regarding claim 37, apparatus claim 37 is rejected for the same reason as system claim 17 since the recited elements would perform the claimed steps. Note, Park teaches the transmitter setting the transmit power of the forward link signal independently of a transmission rate of the base station (Page 7 lines 20-23, it is silent of setting a transmission rate so the power is independent of the transmission rate).

***Response to Arguments***

Applicant's Remarks	Examiner's Response
"In the event that the cited references fail to disclose or suggest all of the elements recited in the claims, then combining elements from the references would not yield the claimed subject matter, regardless of the extent of any teaching, suggestion or motivation."	The combination of Park, Chen, and Ue is reasonable. All three references teach power control for transmission systems.  The three references have steps of measuring a signal and then adjusting transmission power. Since all three references teach power control it is simple substitution to combine the references together.
"Claim 17, as amended, requires "a mobile	Park clearly teaches an energy per chip to

<p>device adapted to...transmit a desired preamble signal component value desired by the mobile device, the desired preamble signal component value being an energy per chip to in an interference density value". For the reasons below, the application submits this is not found in the Park, Ue or Chen references."</p>	<p>an interference density value (<math>E_c/I_o</math>, Page 5 lines 13-16, Page 5 line 25-Page 6 line 5, Page 7 line 24-Page 8 line 4, Page 10 line 19, Page 11 lines 11-14, Page 12 lines 3-9, and Page 14 line 6-9). Based off the <math>E_c/I_o</math> measurement it creates a desired preamble signal component value (power control value based of the <math>E_c/I_o</math> measurements).</p>
<p>"With regard to the rejection of claims 9 and 27, the applicant respectfully disagrees that Ue teaches substituting a desired signal component value with a threshold value."</p>	<p>Applicant must look at the whole rejection. Chen teaches a desired value, however, Ue teaches a threshold value better (and more clearly than Chen). Therefore, combining Ue's threshold value into Chen's desired value teaches the limitations. Plus, it is pretty obvious that Chen teaches a threshold because there is a threshold value associated (not taught in Chen) with a QoS parameter (may not have enough resources to satisfy a QoS parameter and therefore there is a threshold too).</p>

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"One skilled in the art would therefore not combine the Park and Chen references."	See first response.
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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW WENDELL whose telephone number is (571)272-0557. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Wendell/  
Examiner, Art Unit 2618

/Nay A. Maung/  
Supervisory Patent Examiner, Art  
Unit 2618

11/18/2008